

steve@uxopro.com  
Phone: (480) 316-3373  
E-mail: steve@uxopro.com

## Memorandum

**From:** Steve Willis  
**To:** Wayne Miller  
**Date:** June 4, 2016  
**Subject:** Site visit to observe EBR well drilling activities at Former Williams AFB Site ST012.

Wayne:

This memo summarizes my visit to Site ST012 conducted on June 3, 2016. The purpose of the site visit was to monitor drilling and well installation activities and record my observations.

I arrived at the site of well LSZ46 at approximately 8:20 am and signed in at the drill site. Drilling was halted yesterday above the water table at 150'. The following are my observations on the remainder of the boring.

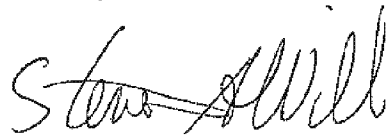
- 160' – 170'. The cuttings consisted of moist silty clays and clays. I could not detect any hydrocarbon odors in any depth interval. Garrett from AMEC measured PID readings ranging from 6.4 to 9.6 ppm.
- 170' – 190'. Cuttings consisted of silty clay to 175', silty to gravelly sand to 180', and silty clay / clayey sand to 190'. No indication of contamination in the cuttings. PID readings ranged from 6.0 to 10.7 ppm.
- 190' – 210'. Silty to sandy clay, no hydrocarbon odors. PID readings ranged from 3.1 to 8.6 ppm.
- 210' – 212'. Cuttings in this interval were silty to gravelly sand with clay, exhibited a strong hydrocarbon odor and a PID reading of 1,710 ppm. Dye test results showed possible NAPL (photo 3) in cuttings collected from the middle of the interval.
- 212' – 220'. Clayey sand, slight hydrocarbon odor; PID = 77.2 ppm @ 215'.
- 220' – 230' – Silty sand with gravel, minor clay. Slight hydrocarbon odors to 228'. No odors in the 228' – 230' interval. PID readings were 21.2 ppm @ 220'; 397 ppm @ 225'; 12.3 ppm @ 230'.
- Screen will be set at 210' – 230'.

Construction of wells LSZ49 on the Army facility and LSZ43 north of Ulysses Avenue was also completed today.

I left the site at approximately 3:30 pm.

Please contact me if you have comments or questions regarding this memo.

Thank you,

A handwritten signature in black ink, appearing to read "Steven A. Will". The signature is written in a cursive, flowing style with some loops and a horizontal line crossing through the middle.

## **SITE PHOTOS**



Photo 1. Well LSZ46. Clay in the UWBZ at 170'.



Photo 2. Sandy clay at the base of the LPZ at 210'.



Photo 3. Dye test at 211'. Slight pink color of ball shows possible NAPL.